

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1 and 20-21 have been cancelled without prejudice or disclaimer. Claims 16-19 are currently being amended. Withdrawn claims 2-15 have also been amended to be method claims ultimately depending from method claim 16. New claim 22, which includes features from original claims 17-19, has been added. New claim 23, which recites features of a pump-probe method has also been added. No new matter has been added.

This amendment adds, changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 2-19 and 22-23 are now pending in this application, of which claims 2-15 are withdrawn from consideration.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1, 16, 20 and 21 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is moot with respect to claims 1, 20 and 21, which have been cancelled. Claims 16-19 have been amended to be in better form for U.S. practice, and applicant submits that the claims as amended are definite under 35 U.S.C. § 112, second paragraph.

Rejections under 35 U.S.C. §§ 102 and 103

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,097,870 to Ranka et al. ("Ranka"). Claims 16-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ranka in view of U.S. 20020009260 to Birk et al. ("Birk"). This rejection is moot with respect to claim 1, which has been cancelled. With respect to the

pending claims under consideration, applicants respectfully traverse these rejections for at least the following reasons.

Claim 16, as amended, recites:

A method for generating illuminating light, comprising:

generating spectrally spread light with the aid of a light source, the light source comprising: a first microstructured optical element that receives and spectrally spreads the light from a primary light source; and at least one further microstructured optical element that receives the spectrally spread light from the first microstructured optical element and further spreads the spectrally spread light,

selecting at least one illuminating light wavelength and/or at least one illuminating light wavelength region from the further spectrally spread light, and *splitting off the illuminating light of the at least one illuminating light wavelength and/or of the at least one illuminating light wavelength region from the further spectrally spread light.*

Ranka and Birk fail to disclose or suggest at least the above italicized features of claim 16.

Ranka discloses optical waveguides with anomalous dispersion in the visible (vis) and near infrared (nir) wavelengths (title). Ranka discloses an application of an optical communication system in FIG. 8, and a different application of a fiber light generator in FIG. 9.

Ranka, however, does not disclose any method of “splitting off the illuminating light of the at least one illuminating light wavelength and/or of the at least one illuminating light wavelength region from the further spectrally spread light” as recited in claim 16, in the context of a light source as recited which comprises “at least one further microstructured optical element that receives the spectrally spread light from the first microstructured optical element and further spreads the spectrally spread light.” The Patent Office equates the second fiber section 89 of the FIG. 8 communication system with the at least one further microstructured optical element as recited in claim 16. Even if the first fiber section 86 and second fiber section 89 of Ranka could be considered to be a first microstructured optical element and further microstructured optical element, respectively, however, Ranka fails to

disclose using light from such fiber sections in the manner recited in claim 16. Specifically, Ranka does not disclose splitting off any illuminating light from the light exiting from the second fiber section 89. Instead, the light from the second fiber section 89 of the Ranka communication system is merely provided to utilization device 84.

Moreover, while Ranka does disclose a fiber light generator in FIG. 9, Ranka makes no suggestion that such a light generator should include a first microstructured optical element and at least one further microstructured optical element as recited in claim 16.

Birk does not cure the deficiencies of Ranka. Birk discloses a microstructured optical element 13 (FIG. 3) which provides a spectrally broadened light beam 25. A beam splitter 31 directs a portion of the spectrally broadened light to a prism 37 which spreads the beam in a spatial fashion (page 3, paragraph [0043]). In contrast to claim 16, however, Birk merely discloses a single microstructured optical element.

Moreover, the Patent Office has articulated no proper reason why one skilled in the art would have substituted the two fiber sections of the communication system of FIG. 8 of Ranka for the microstructured optical element 13 of Birk. The purpose of the two fiber sections of the communications system of FIG. 8 in Ranka is to allow a link 88, such as an optical amplifier, to be placed between the fiber sections of the communications system. The links in Ranka are necessary to allow the multiple fiber sections of a communications system to be connected together. The fiber sections themselves are to provide pulse compression (col. 6, lines 14-15), not to provide spectral broadening per se. While one skilled in the art would expect such amplifier links 88 to separate fiber sections in a communications system such as Ranka, one skilled in the art would not have added the complexity of such a link in the optical element 13 of the spectrometer and display system of Birk. In other words, while one skilled in the art would expect multiple fiber sections separated by optical amplifier links in a communications system such as that of Ranka, one skilled in the art would not have the same need to separate optical element 13 of Birk into sections. It should be noted that the embodiments of Ranka which are to provide a broad spectrum light generator, such as in FIG. 9, employ only a single microstructured optical element.

The dependent claims are patentable for at least the same reasons as claim 16, from which they ultimately depend, as well as for further patentable features. For example, claims 17 and 19 respectively recite “optically exciting a sample with the illuminating light” and “wherein the further illuminating light effects a stimulated emission.” These features are not suggested by Ranka in the context of a spectrally broadening light source comprising a first microstructured optical element and at least one further microstructured optical element. As discussed above, Ranka merely discloses two linked microstructured fiber sections in the context of a communications system where such links are needed. Ranka would not suggest a spectrally broadening light source comprising a first microstructured optical element and at least one further microstructured optical element for use in a system for stimulated emission or optical excitation of a sample.

Withdrawn claims 2-15 have been amended to be method claims ultimately depending from claim 16, and applicant respectfully requests that withdrawn claims 2-15 be rejoined with the pending claims under consideration.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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